## MEDICINE IN THE DEPARTMENT OF THE INTERIOR\*

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MAY I speak of the Interior Department's activities in the field of medicine, educational, preventive, and in the application of medical and surgical relief.

The Department of the Interior is also a wide-spread medical activity of the Government, which carries out its health activity from the frozen fastnesses of the north by means of a floating hospital on the Yukon River in Alaska to the medical care and treatment of the Seminole Indians in the subtropical Everglades of Florida; from its magnificent institutions of research, education, remedial care and disease prevention on the east in Washington, D. C., to the semitropical shores of the Hawaiian Islands on the west.

Between these widely divergent points, the many and varied activities of this department, all encompassed under the general head of medicine, are almost startling in the breadth of their scope and in the means by which they are carried out. They vary from its group of massive institutions in Washington: Howard University, the national university of the negro race in America with its very complete medical college; Freedmen's Hospital, the center for the training of colored physicians of America and for the diffusion of knowledge of hygiene among the colored race of this country; Columbia Institution for the Deaf, where the most advanced methods in the education and training of deaf children are utilized; St. Elizabeth's Hospital, where research by clinic and laboratory, where instruction and training in the problems of psychology, neurology, and pathology of mental diseases, and where studies in mental hygiene and allied subjects are given attention; to the wonderful National Park system of this country, where safeguarding the health of millions of visitors is an urgent problem; to the Geological Survey, where studies and advice on ground waters of the United States for domestic and other purposes are made; to the Bureau of Pensions, with its staff of medical examiners numbering 4500, which provides examinations for thousands of war veterans, wherever they may be found.

The trained nurses of this department carry out their missions of mercy under the shadow of the totem pole in the far north; the field matrons, nurses, and doctors of the Indian Bureau afford relief from sickness, teach hygiene of person and sanitation of home within hearing of the incantations of the Indian medicine man. Its medicines and serums are carried by dog sled, by canoe, by aeroplane, and by the ubiquitous Ford.

Comprising the Department of the Interior are six bureaus and offices, two territories, four eleemosynary institutions, a great national park system, and a railroad. Of these fourteen activities of the department twelve have in part, or very largely, very definite medical activities of some character.

Surveying briefly the many diverse medical func-

tions of this department, we find that the Geological Survey makes investigations of ground water supplies for domestic use, for hospitals, for various states, counties, and municipalities, as well as investigations and reports upon the quality of these water supplies.

The Alaskan Railroad operates a base hospital at Anchorage, Alaska, where during the past fiscal year 1200 patients were treated, 260 surgical operations were performed, and 7973 hospital days relief given.

Our Bureau of Education makes investigations of the status of physical education and hygiene in American colleges; of educational and recreational features of summer camps; of the health of teachers of this country with reference to longevity, absence on account of illness, conditions affecting health, etc.; assists in campaigns with the National Congress of Parents and Teachers to send children to the first grade of school free from disease and physical defects. This bureau is responsible, also, for medical relief to the natives of Alaska, and in this work maintains six hospitals, one on the water which cruised 2200 miles on the Yukon River during the past season of navigation, with its eight physicians and twenty-two nurses. In 1926, 12,434 home visits were made among these native people, 11,147 patients were treated, 34,846 treatments were given, and 6989 days of hospital care provided.

The Bureau of Pensions has on its rolls a half million veterans of the various wars in which this country has been engaged. A large proportion of claims from these beneficiaries require physical reexaminations and a medical rating board to review such claims. This work is done by this bureau of the Interior Department. Its archives, some six millions of files, are veritable storehouses of not only valuable historical data, but genealogical and anthropological information as well.

The two territories under this department, Alaska and Hawaii, through their territorial Boards of Health carry out the usual health measures incident to the prevention and control of reportable diseases, vital statistics, sanitation, etc., to which the department has access.

The territorial Board of Health of Hawaii has a more centralized control of these activities and has to do, as you know, with sanitation, medical inspection of schools, pure food regulations, tuberculosis, leprosy, the operation of hospitals, vital statistics, etc.

The National Park Service administers nineteen national parks and thirty-two national monuments visited by more than two and a quarter million people last year. These recreational and educational playgrounds of America, in area cover more than 15,000 square miles, almost 10,000,000 acres in extent. Safeguarding the health of the millions of visitors to these wonder lands is one of the important functions of the National Park Service, and to this end safe water supplies, sanitary conveniences, properly controlled camping grounds, sewage facilities, mosquito control, and hospital services are provided.

The Columbia Institute for the Deaf, while primarily an educational institution, conducts studies with reference to the hearing of deaf or partially

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deaf pupils, and to the combining of the senses of touch and sight as aids in the understanding of speech.

Howard University—the national university for the colored race, "the capstone of negro education"—with more than 2000 in its student body representing thirty-seven states and eleven foreign countries, conducts schools of medicine, dentistry, and pharmacy—a Class A institution—whose graduates practice in many states and give professional attention to our colored population.

Freedmen's Hospital, established in 1862, is now a prime factor in the training of colored physicians and in the diffusion of a knowledge of hygiene among colored people of this country. This hospital, covering an area of four city blocks in buildings and grounds, with Howard University in the background, extends its services to the indigent residents of the District of Columbia, to residents of the several states, to emergency cases, and others. During the past fiscal year, 4431 patients were treated, 2030 surgical operations were performed, 2050 anesthetics were administered, 19,262 patients received dispensary treatment, and 124,041 hospital days relief were given. This hospital also conducts a school for nursing for the benefit of the young women of the negro race, and this past year graduated twenty-two nurses, making a total of 423 young colored women holding nurses' diplomas from this school.

St. Elizabeth's Hospital, devoted to the treatment of patients from the District of Columbia, and of present and former members of the military and naval services who are suffering from mental diseases, treated 5114 patients during the past fiscal year and gave to these patients 1,607,095 hospital days relief. Its patients were representatives of seventeen races from thirty-two separate countries; in ages varying from under 15 years to more than 70 years, and with all variations in types and kinds of mental alienation.

St. Elizabeth's Hospital for government insane also conducts a strictly medical and surgical service for somatic conditions, a training school for nurses, instruction courses to students of the Army and Navy Medical schools, George Washington, Georgetown, and Howard universities, and in addition to its many allied clinical and laboratory facilities, carries out extensive research having to do with problems of organic lesions, the cause of, or associated with, mental diseases. Lectures on hygiene and educational problems in connection with mental disorders are also given to various welfare, parentteacher, and other organizations. The publications of this institution are of high standing in the scientific and medical world. It is an outstanding comprehensive graduate medical school.

The Indian Bureau in its medical activities extends medical and surgical care and relief to approximately 225,000 Indian wards of the Government out of a total Indian population of this country of about 350,000 persons, exclusive of Alaska. It safeguards the health, and by precept and example teaches health and sanitation to almost 65,000 Indian school children in its 207 day schools

and boarding schools scattered over the Indian reservations.

Its field matrons and field nurses visit tepees, hogans, wickiups, and Indian homes of whatever character, to instruct in disease prevention, the sanitation of the home and personal hygiene. Its physicians conduct a rural practice among these Indian reservations where such Indians are unable or unwilling to accept medical care in the hospitals provided for their use. It is significant that year by year an increasing number of Indian babies are born in Indian Service hospitals.

The Indian Bureau also operates sanatoria and sanatorium schools, the former for the advanced cases of tuberculosis and the latter for the incipient cases among school children. It has a group of special physicians who travel from reservation to reservation where those suffering from trachoma, a veritable scourge among the Indian population of this country, may be treated. During the fiscal year past, more than 30,000 Indian patients were treated in the ninety-one hospitals of this bureau and 523,599 days of hospital relief were given. In the past two years, 36,218 Indians suffering from trachoma have been treated by surgical or medical procedure. This bureau has more than 120 full-time field physicians, 64 part-time physicians, 10 special physicians, 7 dentists, 138 nurses, and 37 field matrons engaged in this work. The Indian Medical Service has been reorganized with trained physicians assigned from the United States Public Health Service who officer the key positions of this service.

Summarizing briefly, there are conducted under this department more than 100 hospitals in which were provided during the past year 2,269,697 days of hospital relief; it teaches preventive medicine, extends relief, etc., to almost a quarter of a million of primitive people of this country; carries on researches into the causes of diseases of man; teaches the blind; enlightens the ignorant; safeguards the health in play and work of millions of our people in their daily life.

In these functions, it works in close cooperation with local, county, state, federal, and voluntary health organizations throughout the country, whose aid and assistance have contributed in no small part to the results so sketchily outlined here. In cooperation with other agencies, the Red Cross has provided nurses and nutrition workers; associations interested in the welfare of the Indians have provided services of various character; in states where there are large Indian populations their health agencies have and are working in health matters affecting Indians; religious organizations, women's clubs, etc., have contributed their great part; the Veterans' Bureau and state laboratories have been made available, and the United States Public Health Service has in very large measure made available both its facilities and its personnel. Such cooperation and services are here gratefully acknowledged.

The Interior Department has been described as "the fact-finding department for internal development"; "A Federal university for the people"; its mission is largely educational with many of its activities devoted to the discovery and dissemination of knowledge; with a curriculum covering many fields

of learning and its "faculty" including hundreds of scientists, specialists and professional men; its "student body," the people of the United States.

It is fact finding in that it searches out the presence of sickness, malnutrition, and insanitary conditions and distress and poverty among the primitive peoples of this country with the purpose of curing such disease, eliminating such insanitary conditions and relieving the distress and poverty by the application of remedial measures both with respect to disease conditions and in the building up of a better economic status among these people. Its nurses, its doctors, its matrons, its skilled specialists, are teaching preventive medicine as well as curative medicine to the thousands of beneficiaries of our Government through this department.

In the Interior Department medicine has come to mean the practice of theories of health which have been proven by experience together with the art and science of curing the sick.

## THE PROFIT AND LOSS ACCOUNT OF MODERN MEDICINE\*

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WONDERFUL progress has been made in medicine during recent years, but the profit has been attended by a loss which must be considered in balancing the account. In taking stock of the gain we will find inspiration for the future; in counting the cost we may guard against the undue sacrifices of the past.

The most distinct profit and loss are seen in medical education. About two decades ago it was recognized that an increasing number of low-grade practitioners were being graduated each year by medical colleges and licensed by state governments. An investigation of the medical schools showed that many of them were poorly equipped, had scant clinical material and lacked sufficient funds to secure the necessary time of efficient teachers. A deliberate and systematic movement was inaugurated to remedy this evil. By moral suasion, by state legislation and by the combined efforts of the better schools, the entrance requirements were advanced, the number and length of the teaching sessions were increased, the character and scope of the curricula were improved, and the minimum number and approximate pay of the full-time teachers were specified.

The result of this propaganda has been that the total number of medical schools in the United States has been reduced from 160 to 80, and the total number of medical students from 28,142 to 18,840. In other words, eighty medical schools, weak either educationally or financially, have ceased to teach, and 10,000 medical students not properly qualified for the profession have ceased to study.

The benefit of this movement is already markedly seen in the medical colleges, where the qualifications of the student are found improved and the character of the instruction more satisfactory. There has not yet been time for the benefit of the change to be very apparent in medical practice, but the lessened number and improved quality of the graduates turned out each year will unquestionably in the end result in a great improvement in the ethics and efficiency of the profession.

The profit, however, has not been without its loss, and while we congratulate ourselves on what has been gained by this educational movement, it is only just to count what it has cost. Many worthy, although struggling, colleges have been put out of existence and their property practically confiscated, and many earnest and promising young men have been denied an opportunity to study medicine because of some defect in their preliminary high school or college education. Again, the modern medical school is not self-supporting and is a heavy financial tax on public funds or private philanthropy. Expensive laboratories, salaries of full-time instructors and the necessary provisions for clinical teaching, impose a cost that can never again be met by tuition fees. If each student were charged what it actually cost to teach him, none but the rich could afford to study medicine. The rich, as a rule, do not care to become doctors, and as doctors are a necessity and not a luxury the rich will have to be educated to contribute of their wealth to make doctors. Medical education has ceased to be a business and become a philanthropic work which must be supported by state appropriations and individual benefactions.

Finally the cost of the modern method of teaching is seen in the graduate himself. If he has not paid in money he has been made to pay in time for his education. He has been kept in the laboratory, lecture hall and the hospital ward, a nonproducer, dependent on others for his support, until he reaches an age at which most of his contemporaries are married and settled in life. He is conscious of the sacrifice he has made, and usually overappreciative of the attainments he has acquired. He desires to be a specialist, and will only do general practice as a means to an end. He is determined to locate in a city and unwilling to settle in the country, preferring to starve himself in the one rather than to starve his ambitions in the other.

This results in an urban congestion and rural depletion of medical men which has reached a point to give serious concern, and for which some remedy must be found. It has been proposed that special medical schools be operated to produce low-grade practitioners for country consumption, but this is impracticable and unthinkable.

The remedy for the evil is to make country practice less arduous and more profitable, and it is hoped that this will come about in time with the evolution of our social, economic, and political life. When we compare the conditions that exist in the country today with those which existed even twenty years ago, and recall the changes that have resulted from the good-roads movement, the development of the automobile, the installation of the telephone, phonograph and radio, the introduction of the parcel post and rural mail delivery, the improvement of the public school system, the perfection of heating and lighting plants and the invention of labor-saving machinery, it is not difficult to believe that in the not far distant future the life of the country doctor

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